

The opinion in support of the decision being entered  
today is *not* binding precedent of the Board.

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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*Ex parte* XIAOCHUN NIE and CHRISTOPHER L. FLICK

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Appeal 2007-1839  
Application 10/022,151  
Technology Center 2100

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Decided: September 26, 2007

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Before JAMES D. THOMAS, ANITA PELLMAN GROSS, and JAY P.  
LUCAS, *Administrative Patent Judges*.

THOMAS, *Administrative Patent Judge*.

DECISION ON APPEAL

This appeal involves claims 1 through 8, 10 through 16, 18 through 35, 37 through 59, and 61 through 64. Claims 9, 17, 36, and 60 have been canceled. We have jurisdiction under 35 U.S.C. §§ 6(b) and 134(a).

As best representative of the disclosed and claimed invention,  
independent claim 1 is reproduced below:

1. A method comprising:

processing a request to create a virtual reality scene, wherein the scene  
is to be able to be translated and rotated;

processing a request to add at least two media objects to the virtual  
reality scene, said processing including associating each media object with a  
series of views of the object from various orientations and locations in three  
dimensional space;

preparing a translation vector and a rotation matrix for each of the  
media objects to define an orientation and a location of each of the media  
objects in the scene; and

displaying the scene.

The following references are relied upon by the Examiner:

Gill	US 6,081,262	Jun. 27, 2000
Lanier	US 5,588,104	Dec. 24, 1996
Autry	US 5,724,106	Mar. 3, 1998
Kopelman	US 6,664,986 B1	Dec. 16, 2003
		(filed May 30, 2000)

All claims on appeal stand rejected under 35 U.S.C. § 103. As to  
claims 1 through 8, 10 through 16, 20 through 35, 39 through 47, 50 through  
59, 63, and 64, the Examiner relies upon Gill in view of Lanier in a first  
stated rejection. To this combination of references, the Examiner adds Autry  
as to claims 18, 19, 37, 38, 48, and 49 in a second stated rejection. Lastly, in  
a third stated rejection of claims 61 and 62, the Examiner relies upon Gill in  
view of Lanier, further in view of Kopelman.

Rather than repeat the positions of the Appellants and the Examiner, reference is made to the principal Brief and Reply Brief for the Appellants' positions, and to the Answer for the Examiner's positions.

### OPINION

At the outset, we *pro forma* reverse the three stated rejections under 35 U.S.C. § 103 of the claims on appeal because the subject matter encompassed by them must be reasonably understood without resort to speculation. Presently, speculation and conjecture must be utilized by us and by the artisan as the claims on appeal are substantially ambiguous and fail to positively recite various relationships among the recited steps or elements. *Note In re Steele*, 305 F.2d 859, 862, 134 USPQ 292, 295 (CCPA 1962) and *In re Wilson*, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970).

It is emphasized that the reversal of the three stated art rejections of record is not based on the merits. Once properly definite claims are presented for examination, the Examiner may reconsider the teachings of the respective references already relied upon, in addition to other or new prior art in formulating new art rejections.

### NEW REJECTIONS UNDER 37 C.F.R. § 41.50(b)

Claims 1 through 8, 10 through 16, 18 through 35, 37 through 59, and 61 through 64 are rejected under 35 U.S.C. § 112, second paragraph, as being vague and indefinite. As to exemplary method independent claim 1, the repeated use of the word "to" with respect to various verb forms creates ambiguities as to whether there is a positive statement of the function attributed to the verb. For example, processing a request to create a virtual reality scene is not a positive statement that merely "processing" such a

request actually creates such a virtual reality scene. The scene is also characterized as “to be able to be translated and rotated.” Again, there is no positive statement of any translation or rotation. Additionally, the preparing clause merely is “to define” an orientation and a location relative to a translation vector and a rotation matrix. The definition is not positively stated in the claim. Since there are numerous future acts that may never occur as recited in this representative claim, its metes and bounds are not reasonably determinable by an artisan or one endeavoring to avoid infringement thereof. Similarly, processing a request to add at least two media objects is not a positive statement that merely “processing” such a request actually adds at least two media objects. The claim merely presumes as well that the so-called “scene” contains media objects otherwise recited. Moreover, “the scene” that is recited at the end of independent claim 1 on appeal ambiguously refers to the originally recited scene or a newly created scene. There is no structure provided to permit the display of the scene. Additionally, as to dependent claim 2, merely receiving a request to manipulate a scene is not a positive statement that the scene is manipulated. These ambiguities are continued through each of the other independent claims on appeal as well as their respective dependent claims in a comparable manner. We especially note as well that the preamble recitation in independent claims 42 and 53 relating to “when executed” does not positively state that the processor actually executes any instructions. In fact, the execution may never occur.

The claims are replete with numerous ambiguities/inferences which lead us to conclude that the claims are not reasonably definite. One can envision the difficulty that the noted vagueness would engender by

imagining a future prospective user of a process similar to the one claimed. If that user merely acknowledged the request, and did nothing toward manipulating the scene, he would possibly, or possibly not, be infringing. The fact that the claims are ambiguous as to these matters makes them indefinite.

In a similar manner, we reject claims 1 through 8, 10 through 16, 18 through 29, 42 through 59, and 61 through 64 under 35 U.S.C. § 101 as being directed to non-statutory subject matter. For example, independent claim 23 directly claims in its preamble an application program interface or API. This is a purely software device which has no structural elements or is devoid of any relationship with respect to a machine. The machine readable media of independent claims 42 and 53, for example, have the same recitations but fail to specify that the medium is a structural element or a tangible medium, particularly in view of the expansive nature of the media contemplated within paragraph [0016] at Specification page 3, which includes mere signals and no physical device. Specification paragraph [0019] bridging pages 4 and 5 of the Specification as filed indicates that the methods contemplated in this invention are to be embodied in terms of software and data structure elements such as APIs. We know of no authority which permits the direct claiming of APIs and intangible media without a machine or a machine environment.

We also note in passing that this same latter-mentioned paragraph indicates at the top of page 5 of the Specification that prior art APIs perform the manipulating, rendering and display functions of various two-dimensional and three-dimensional objects as well as audio representations.

In summary, we have *pro forma* reversed the Examiner's three stated art rejections under 35 U.S.C. § 103 of claims 1 through 8, 10 through 16, 18 through 35, 37 through 59, and 61 through 64. Pursuant to 37 C.F.R. § 41.50(b), we have instituted new grounds of rejection of all claims on appeal under 35 U.S.C. § 112, second paragraph, and have set forth an additional rejection of claims 1 through 8, 10 through 16, 18 through 29, 42 through 59, and 61 through 64 as being directed to non-statutory subject matter.

This decision contains new grounds of rejection pursuant to 37 C.F.R. § 41.50(b) (effective September 13, 2004, 69 Fed. Reg. 49960 (August 12, 2004), 1286 Off. Gaz. Pat. Office 21 (September 7, 2004)). 37 CFR § 41.50(b) provides "[a] new ground of rejection pursuant to this paragraph shall not be considered final for judicial review."

37 C.F.R. § 41.50(b) also provides that the Appellants, WITHIN TWO MONTHS FROM THE DATE OF THE DECISION, must exercise one of the following two options with respect to the new ground of rejection to avoid termination of the appeal as to the rejected claims:

(1) *Reopen prosecution*. Submit an appropriate amendment of the claims so rejected or new evidence relating to the claims so rejected, or both, and have the matter reconsidered by the examiner, in which event the proceeding will be remanded to the examiner. . . .

(2) *Request rehearing*. Request that the proceeding be reheard under § 41.52 by the Board upon the same record. . . .

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No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a).

REVERSED; 37 C.F.R. § 41.50(b)

Gross, *Administrative Patent Judge, dissenting-in-part.*

Although I agree with my colleagues' new ground of rejection under 35 U.S.C. § 101, I disagree with the reversal of the art rejections *pro forma* and the new ground of rejection under 35 U.S.C. § 112, second paragraph. My colleagues state *supra* that in claim 1, the phrases "to create a virtual reality scene," "to add at least two media objects to the virtual reality scene," and "to define an orientation and a location of each of the media objects in the scene" are ambiguous as the steps of creating a scene, adding objects to the scene, and defining an orientation are not positively recited. My colleagues state, "Since there are future acts that may never occur as recited in this representative claim, its metes and bounds are not reasonably determinable by an artisan or one endeavoring to avoid infringement thereof." In other words, according to my colleagues, the skilled artisan reading claim 1 would not know whether or not a virtual reality scene is actually created, whether or not media objects are added to the scene, etc.

I, on the other hand, find that any ambiguity created by the lack of a positive recitation of a step is removed by the recitations in subsequent steps. For example, the second step is a request to add media objects to "*the* virtual reality scene" (emphasis added). Such a request cannot make sense unless the scene is actually created by the first processing step. Similarly, the third step of preparing a translation vector and a rotation matrix for each of "*the* media objects" makes no sense unless the second step actually adds such media objects to the scene. Further, as to the reference to "the scene" at the end of claim 1, I agree that the step could better reference what version of the scene is to be displayed. However, it seems clear to me that "the scene" to be displayed is the modified scene after the media objects have been



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added, since the step of displaying the scene is the final step after all modification steps. Lastly, as to there being no structure provided to permit display of the scene, the claim is a method claim and, as such, does not need a recitation of the structure for performing the steps. Thus, I do not find the claims to be indefinite and, therefore, can determine the metes and bounds. In other words, I would not enter a new ground of rejection under 35 U.S.C. § 112, second paragraph, and would consider the art rejections.

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BLAKELY SOKOLOFF TAYLOR & ZAFMAN  
1279 OAKMEAD PARKWAY  
SUNNYVALE CA 94085-4040